FCC 94-271

Before the

Federal Communications Commission

Washington, D.C. 20554

In the matter of	)	
	)	
Amendment of Part 90 of the	)	PR Docket No. 93-144
Commission's Rules to Facilitate	)	RM-8117, RM-8030
Future Development of SMR Systems	)	RM-8029
in the 800 MHz Frequency Band	)	
	)	
and		
	)	
Implementation of Section 309(j)	)	
of the Communications Act -	)	PP Docket No. 93-253
Competitive Bidding	)	
800 MHz SMR	)	

FURTHER NOTICE OF PROPOSED RULE MAKING

Adopted: October 20, 1994 **Released:** November 4, 1994

Comment Date: December 5, 1994
Reply Comment Date: December 20, 1994

By the Commission: Commissioner Quello issuing a separate statement at a later date.

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I. INTRODUCTION

1. In this Further Notice of Proposed Rule Making, we propose to implement a new framework for licensing of Specialized Mobile Radio (SMR) systems in the 800 MHz band. We propose new rules for assignment of blocks of SMR spectrum in defined market-based service areas that will facilitate the development of wide-area, multi-channel SMR systems that are comparable to and compete with cellular and broadband Personal Communications Services (PCS) systems. We also propose to designate a portion of the 800 MHz SMR band allocation for continued licensing on a local, station-by-station basis to accommodate the needs of smaller SMR systems that primarily seek to provide local service. The Further Notice addresses how existing SMR systems will be treated under this new regulatory framework, particularly in instances where they are operating on channels that will become part of the spectrum blocks to be licensed on a wide-area basis. We also propose new application and licensing procedures for both the wide-area SMR spectrum blocks and locally licensed SMR channels, including competitive bidding procedures for resolution of mutually exclusive applications. Finally, we seek comment on whether we should continue to license SMR systems on 800 MHz General Category channels or on other non-SMR channels through inter-category sharing.

2. Our primary goal in this proceeding is to establish a flexible regulatory scheme for the 800 MHz SMR service that will allow for more efficient licensing, eliminate unnecessary regulatory burdens on both existing and future licensees, and thereby enhance the competitive potential of SMR services in the mobile services marketplace. At the same time, we wish to ensure that we grant licenses to those who value the spectrum most highly and will maximize its use to provide the best quality and variety of service to consumers. The proposals in this Further Notice are intended to build upon and refine our previous efforts to promote the development of wide-area SMR service in the 800 MHz band, particularly our 1993 *Notice of Proposed Rule Making* that initiated this docket.[1] These proposals are also part of our continuing implementation of the new regulatory framework for mobile radio services enacted by Congress in the Omnibus Budget Reconciliation Act of 1993.[2] Thus, the proposed rules for the 800 MHz SMR service are a direct outgrowth of our recently adopted *Third Report and Order* in GN Docket No. 93-252,[3] in which we concluded that our SMR rules should be,

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[1]Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, PR Docket No. 93-144, *Notice of Proposed Rule Making*, 8 FCC Rcd 3950 (1993) (*Notice*).

[2]Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, Title VI § 6002(b), 107 Stat. 312, 392 (1993) (Budget Act).

[3]*See* Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, GN Docket No. 93-252, *Third Report and Order*, FCC 94-212, adopted August 9, 1994, released September 23, 1994 (*CMRS Third Report and Order*). As a result of a Congressional mandate, we initiated another proceeding which examined and revised our rules pertaining to Part 90 services generally, including the 800 MHz SMR service. *See* Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory

to the fullest extent possible, comparable to our rules governing competing commercial mobile radio service (CMRS) providers. Our overriding goal in the CMRS proceeding has been to achieve regulations that maximize competition among CMRS providers and eliminate regulatory distortions in the mobile services market. The SMR industry presents certain unique issues because of the already-existing diversity of SMR services and the competitors providing them. As detailed below, our proposals attempt to strike a fair and equitable balance between the competing interests of local and wide-area SMRs operating in the 800 MHz band. We believe it will facilitate competitors' deployment and operation of SMR systems by eliminating regulations that permit "warehousing" of spectrum, and establishing a licensing scheme that is expeditious and furthers the congressionally-mandated goal of regulatory symmetry between SMR, cellular and broadband PCS.

II. BACKGROUND

A. Evolution of the SMR Service

3. The Commission established the SMR service in 1974 as a private land mobile radio service in the 800 MHz band, envisioning that SMR systems would primarily provide radio dispatch communications to eligible customers within local areas.[4] The Commission allocated a total of 14 MHz of spectrum in the 800 MHz band exclusively to SMR systems. This spectrum is divided into 280 channels, 200 of which are contained in a contiguous 10 MHz block, while the remaining 80 channels are divided into 8 blocks with other private land mobile services (e.g., Public Safety, Industrial/Land Transportation and Business) assigned to the intervening channels.[5] In 1990, the Commission allocated 150 additional 800 MHz channels to the General Category, which are available for licensing to SMR providers as well

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Treatment of Mobile Services, GN Docket No. 93-252, *Second Report and Order*, 9 FCC Rcd 1411 (1994) (*CMRS Second Report and Order*). In the context of that proceeding we requested additional comment regarding wide-area licensing in the 800 MHz band. *See* Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, GN Docket No. 93-252, *Further Notice of Proposed Rule Making,* 9 FCC Rcd 2863, ¶¶ 29-34, 64-66 (1994) (*CMRS Further Notice*). Because the proposals presented in this Further Notice are an outgrowth of and influenced by both the previous record in this proceeding and our findings and conclusions in the CMRS proceeding, we, therefore, incorporate the relevant portions of the record from the CMRS docket into this proceeding.

[4]*See* An Inquiry Relative to the Future Use of the Frequency Band 806-960 MHz and Amendment of Parts 2, 18, 21, 73, 74, 89, 91 and 93 of the Rules Relative to Operations in the Land Mobile Service Between 806-960 MHz, Docket No. 18262, *Memorandum Opinion and Order*, 51 F.C.C.2d 945, ¶¶ 43, 67 (1975), *aff'd* NARUC v. FCC, 525 F.2d 630 (D.C. Cir. 1976), *cert. denied* 425 U.S. 992 (1976); Amendment of Part 90 of the Commission's Rules to Release Spectrum in the 806-821/851-866 MHz bands and to Adopt Rules and Regulations Which Govern Their Use, PR Docket No. 79-191, *Second Report and Order*, 90 F.C.C.2d 1281, ¶ 12 (1982), *recon. Memorandum Opinion and Order*, 95 F.C.C.2d 477 (1983); D. Fertig (FCC, PR, Policy and Planning Branch), *Specialized Mobile Radio*, Appendix (Mar. 1991).

[5]A "channel" in this service consists of 50 kHz of spectrum. As discussed in Section IV(A)(4) *infra*, not all of the 14 MHz of spectrum is available in the Canadian and Mexican border areas.

as to all other Part 90 services.[6] Licensees on the 280 SMR-only channels are assigned either one or five channels at a time on a station-by-station basis, and the geographic distribution of stations is defined by the location, antenna height, and transmitter power of each base station in the licensees' systems.[7]

4. Since 1974, the SMR service has experienced rapid growth and diversification.[8] As of May, 1994, our data base indicates a total of 33,000 SMR authorizations with 20,000 trunked stations and 13,000 conventional stations, with virtually all channels in major markets either in use or under construction. Although the service consisted primarily of dispatch providers early on, in recent years SMR service has evolved into a diverse industry comprised of systems utilizing advanced technologies to provide an array of services. The types of SMR service offerings currently available range from traditional radio dispatch service for local customers to more sophisticated voice and data transmissions for customers over vast geographic areas.

5. Although the 800 MHz SMR service rules were designed to require licensing on a station-by-station, channel-by-channel basis, SMR licensees have increasingly expressed an interest in accumulating large numbers of channels and using advanced technologies to increase spectrum re-use and serve wide areas efficiently. In many instances, licensees seek to convert existing analog systems utilizing a small number of high-power stations to digital systems that cover the same area with numerous low-power stations. Initially, we attempted to respond to this demand through waivers[9] and modification of our construction and loading

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[6]*See* Trunking in the Private Land Mobile Radio Services for More Effective and Efficient Use of the Spectrum, PR Docket No. 87-213, *Report and Order*, 5 FCC Rcd 4016 (1990).

[7]47 CFR § 90.621(c); Co-Channel Protection Criteria for Part 90, Subpart S Stations Operating Above 800 Mhz, PR Docket No. 93-60, *Report and Order*, 8 FCC Rcd 7293 (1993) (*Co-Channel Protection Report and Order*).

[8]For example, according to a 1986 survey conducted by Radio Communications Report (RCR), the largest SMR provider serviced 3,300 mobiles. By contrast, RCR's 1994 survey, indicates that the largest SMR provider serviced 300,000 mobiles. Moreover, in 1994, at least 16 SMR companies serviced more than 3,300 mobiles (the maximum service amount only fourteen years ago). *Compare* Radio Communications Report 5 (January 15, 1986) *with* Radio Communications Report 14 (February 14, 1994) (RCR's Surveys of Top SMR Operators). It has been projected that by the year 2000 SMR services will reach 4.2 million customers. *See* Cellular Telecommunications Industry Association, *The Changing Wireless Marketplace*, 8 (Dec. 17, 1992). In fact, in 1986, such growth prompted the Commission to allocate additional spectrum in the 900 MHz band to the SMR service. *See* Amendment of Parts 2, 15 and 90 of the Commission's Rules and Regulations to Allocate Frequencies in the 900 MHz Reserve Band for Private Land Mobile Use, GN Docket No. 84-1233, *Report and Order*, 2 FCC Rcd 1825, ¶¶ 27-44 (1986).

[9]*See e.g.*, Fleet Call, Inc., *Memorandum Opinion and Order*, 6 FCC Rcd 1533, *recon. dismissed*, 6 FCC Rcd 6989 (1991); Letter from Ralph A. Haller, Chief, Private Radio Bureau to David Weisman, DA 92-1734, 8 FCC Rcd 143 (1993) (*Weisman Letter*).

requirements.[10] In our 1991 *Fleet Call* decision, we waived our rule requiring SMR licensees to construct their systems in one year so that Fleet Call could develop an SMR system that would offer wide-area digital voice and data service.[11] In 1993, we adopted rules allowing SMR applicants to request up to five years to construct complex, coordinated, or integrated wide-area systems as defined by § 90.629 of our Rules.[12] We also have permitted applicants for wide-area systems to aggregate their mobiles to satisfy loading requirements and thereby obtain additional channels.[13] Notwithstanding these efforts to accommodate the development of wide-area systems, however, our rules required (and still require) each SMR base station and channel to be individually licensed, regardless of whether it is part of a wide-area, multi-channel system.

6. In 1992, we received petitions for rule making filed by NABER, A & B Electronics, and AMTA proposing revisions to our SMR rules aimed at facilitating the development of wide-area SMR systems. On May 13, 1993, we adopted the *Notice,* which proposed to establish a new framework for wide-area licensing. Specifically, we proposed to streamline site-by-site, channel-by-channel licensing procedures so that licensees would be able to acquire blocks of up to 42 channels within a Commission-defined service area (based on either Major Trading Areas (MTAs) or Basic Trading Areas (BTAs))[14] under a single "Expanded Mobile Service Provider" (EMSP) license.[15] This license would authorize the licensee to use any available channel covered by the authorization, and to locate individual base stations at any available site within the service area based on self-coordination. In the event that mutually exclusive applications remained, we proposed to resolve them through lottery, or through competitive bidding if the Commission received authority to use auctions for this purpose.[16] We further proposed that licensees be required to cover 80 percent of their

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[10]*See* Amendment of Part 90 of the Commission's Rules Governing Extended Implementation Periods, PR Docket No. 92-210, *Report and Order*, 8 FCC Rcd 3975 (1993) (*Extended Implementation Report and Order*).

[11]Fleet Call, Inc., *Memorandum Opinion and Order*, *supra* note 9, ¶ 36.

[12]*Extended Implementation Report and Order, supra* note 10, ¶ 6.

[13]*Weisman Letter, supra* note 9, 8 FCC Rcd at 144.

[14]Rand McNally & Company, Inc. (Rand McNally) organizes the 50 states and the District of Columbia into 47 MTAs and 487 BTAs based upon economic activity. *See* Rand McNally, *Commercial Atlas and Marketing Guide*, 38-39 (1992).

[15]*Notice, supra* note 1, ¶ 7. Because today's proposal differs significantly from that initially described in the *Notice*, we will not refer to SMR systems to be licensed on a wide-area basis under our revised proposal as EMSPs. Instead, because we propose to use MTAs as the basis for wide-area licensing, we will refer to such systems as "MTA-based" systems or "MTA licensees." Existing SMR licensees who have previously received extended implementation authority to construct wide-area systems will be referred to generally as "wide-area" licensees.

[16]*Id.*

service area within five years rather than being subject to a channel loading requirement.[17] In addition, we proposed that EMSP licensees provide interference protection to all co-channel incumbent licensees operating within their service area.[18] Commenters expressed broad support for establishment of a wide-area licensing approach in the 800 MHz band.[19]

B. Recent Legislative and Regulatory Developments

7. On August 10, 1993, shortly after the *Notice*'s reply comment date, Congress enacted the Budget Act in which it amended Section 332 of the Communications Act of 1934[20] to create two statutorily-defined categories of mobile service: CMRS and private mobile radio services (PMRS). Congress further directed the Commission to implement these classifications in its regulations and to provide for comparable regulation of substantially similar CMRS services. Pursuant to this congressional mandate, we initiated our CMRS proceeding in GN Docket 93-252 and adopted the *CMRS Second Report and Order* on February 3, 1994. In the *CMRS Second Report and Order*, we noted that one of the factors that led Congress to revise Section 332 was its view that SMR providers seeking to compete with cellular and PCS by providing wide-area, multi-channel service should be reclassified as CMRS.[21] We concluded that all SMR systems providing interconnected service would be reclassified as CMRS, while those not providing such service would be classified as PMRS.[22]

8. On April 20, 1994, we adopted the *CMRS Further Notice*, in which we proposed revisions to our technical, operational, and licensing rules and procedures for reclassified CMRS services to conform to the Budget Act's CMRS regulatory paradigm. In the *CMRS Further Notice*, we requested specific comment on certain aspects of the 800 MHz SMR service, including channel assignment policy, definition of service area, construction period, and coverage requirements for wide-area systems.[23] We also observed that the proposal for wide-area licensing made in our 1993 *Notice* might require revision in light of the intervening

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[17] *Id.*

[18] *Id.*

[19] *See e.g.,* Comments of AMTA at 1; Comments of Nextel (formerly Fleet Call, Inc.) at 10, n.20; Comments of Dial Page at 1; Comments of SBC at 1-2; Comments of PacTel Paging at 3-4, nn. 5, 7; Reply Comments of Questar at 2; Reply Comments of Advanced MobileComm, Inc. at 2-3; Comments of NABER at 2-3, 5-6; Comments of PowerSpectrum, Inc. at 4-7; Reply Comments of Mitchell E. Shipman at 2-4; Reply Comments of The Southern Company at 2-3; Comments of E.F. Johnson Company at 3-4. *See* Appendix C for a list of pleadings in PR Docket No. 93-144 and the acronyms used to cite commenters.

[20] Communications Act of 1934, as amended, 47 U.S.C. §§ 151-713 (Communications Act).

[21] *CMRS Second Report and Order, supra* note 3, at ¶¶ 7, 11.

[22] *Id.*, ¶ 11.

[23] *CMRS Further Notice, supra* note 3, ¶¶ 29-34, 64-66.

statutory changes enacted in the Budget Act and the heavy volume of licensing activity in the 800 MHz band that had occurred since the *Notice* was adopted.[24]

9. On August 9, 1994, we adopted our *CMRS Third Report and Order*. In the *CMRS Third Report and Order*, we concluded that 800 MHz SMR licensees either compete or have the potential to compete with other existing and planned wide-area CMRS providers, such as cellular and broadband PCS licensees.[25] Based on this finding, we determined that the technical and operational requirements for the 800 MHz SMR service should be made comparable, to the extent feasible, to those applicable to other CMRS providers. Specifically, we noted that our PCS and cellular rules provide significantly greater flexibility than our current SMR rules, in that they (1) authorize use of spectrum over Commission-defined service areas, (2) assign contiguous spectrum blocks to a single licensee on an exclusive basis, (3) use construction and coverage requirements rather than channel loading requirements to ensure efficient use of the spectrum, and (4) afford maximum flexibility to locate, design, construct, and modify facilities within one's licensing area, so long as no interference is caused to other licensees.[26] We therefore concluded that establishing a similarly flexible licensing scheme for 800 MHz SMR systems would enable licensees to compete more effectively with cellular and PCS.[27]

10. We also concluded that MTAs were the most suitable geographic "building blocks" for a wide-area SMR licensing framework at 800 MHz because: (1) they represent natural commercial markets that are large enough to enable licensees to take advantage of economies of scale in developing their service;[28] (2) many of the authorized wide-area SMR systems are for MTA-sized areas or larger geographic regions; and (3) they would allow wide-area licenses to be of greater utility if licensees are required to provide co-channel protection to incumbent licensees within their service areas.[29]

11. While we concluded in the *CMRS Third Report and Order* that MTA-based licensing was desirable and feasible, we did not adopt other specific rules for the service at

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[24] *Id.*, ¶ 32.

[25] *CMRS Third Report and Order, supra* note 3, ¶ 94.

[26] *Id.*, ¶ 95.

[27] *Id.*, ¶ 97.

[28] In the PCS context, we adopted MTA- and BTA-sized service areas instead of the Metropolitan Statistical Areas (MSAs) and Rural service areas (RSAs) used in our cellular rules in order to allow PCS licensees to benefit from economies of scale. *See* Amendment of the Commission's Rules to Establish New Personal Communications Services, GEN Docket No. 90-314, *Memorandum Opinion and Order*, 9 FCC Rcd 5031, ¶ 76 (1994).

[29] *Id.*, ¶ 99.

that time. We noted that the record in response to the *CMRS Further Notice* included a plan put forward by Nextel, and opposed by many other SMR licensees, whereby the contiguous block of 200 SMR channels in the 800 MHz band would be authorized to a single licensee for its exclusive use throughout an MTA and incumbent licensees within each MTA block would be relocated to other SMR channels.[30] Because the specific elements of the Nextel proposal were not presented in the *CMRS Further Notice*, however, and in light of the variety of other views expressed in the CMRS proceeding, we concluded that adoption of final rules for 800 MHz SMR systems should be deferred and a further notice of proposed rule making in this docket issued to afford an opportunity for further public comment on specific alternatives. In addition, we froze acceptance of new SMR applications pending resolution of this further proceeding. We indicated, however, that we would consider applications on a waiver basis if the applicant could show that the proposed license would not extend coverage beyond the service area and frequencies previously licensed to that applicant.[31]

III. FURTHER PROPOSAL

12. Based on our review of the record in the *800 MHz* docket and the CMRS proceeding, we propose to adopt a new comprehensive regulatory structure for licensing of 800 MHz SMR providers as outlined in the *CMRS Third Report and Order*. Under this proposal, we would:

- Designate the 10 MHz of contiguous SMR spectrum in the 800 MHz band for licensing in four 2.5 MHz blocks in each MTA[32];
- Designate the remaining 80 non-contiguous 800 MHz SMR Category channels

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[30]*See* Comments of Nextel at 11-12; Reply Comments of Nextel at 13.

[31]*CMRS Third Report and Order, supra* note 3, ¶ 341, n.640.

[32]The FCC authorization for the use of a specified block of 2.5 MHz is referred to herein as an "MTA license." We note that Rand McNally is the copyright owner of the MTA/BTA Listings, which list the BTAs contained in each MTA and the counties within each BTA, as embodied in Rand McNally's Trading Area System MTA/BTA Diskette, and geographically represented in the map contained in Rand McNally's *Commercial Atlas & Marketing Guide*. The conditional use of Rand McNally's copyrighted material by interested persons is authorized under a blanket license agreement dated February 10, 1994. This agreement covers the 800 MHz SMR service and requires authorized users of the material to include a legend on reproductions (as specified in the license agreement) indicating Rand McNally's ownership. *See CMRS Third Report and Order, supra* note 3, ¶ 98, n.197 In the *CMRS Third Report and Order*, we indicated that we would license a total of 51 MTAs, which included the 47 Rand McNally MTAs, an Alaska MTA, and three other MTAs comprised of five U.S. possessions (namely, a Guam-Northern Mariana Islands MTA, Puerto Rico-U.S. Virgin Islands MTA, American Samoa MTA). *Id.*, ¶ 99, n. 198. The listing of counties, parishes and census divisions that comprise each BTA and MTA is also available for inspection at the Technical Information Center. (Note that this is a listing of Rand McNally's 47 MTAs and 487 BTAs. Thus the census divisions of Alaska are listed under the Seattle MTA, instead of separately in an Alaska MTA-like service area, and the insular areas are not listed.)

(totalling 4 MHz of spectrum) for local licensing on a channel-by-channel basis[33];

- Dispose of mutually exclusive initial applications for all 800 MHz SMR licenses (both MTA-based and local) through competitive bidding;

- Grant the following rights as part of each MTA license: (1) the right to construct at any available site within the MTA, and to add, subtract, or move site locations within the MTA during the license term, on a "self-coordinated" basis[34]; (2) the right to use any available spectrum within the licensee's designated spectrum block on a self-coordinated basis, including full discretion over channelization of available spectrum within the block (subject to co-channel interference protection of incumbent licensees as discussed *infra*); (3) the right to use any spectrum within the MTA block that is recovered by the Commission from an incumbent SMR licensee in the event of termination of the incumbent's license; and (4) the right to negotiate to acquire incumbent systems within the MTA block, based on our initial finding that such assignments are generally within the public interest and would be approved by the Commission;[35]

- Establish a five-year construction period for MTA licensees from the date the MTA license is granted, with licensees required to provide coverage to one-third of the population within their MTA within three years after initial grant of the MTA license and to two-thirds of their population by the end of the five-year period, and with licenses subject to cancellation for failure to meet these interim coverage requirements;

- Allow incumbent SMR systems within each MTA block to continue operating at previously authorized sites and on previously authorized channels, and require MTA licensees to provide co-channel interference protection to such facilities;

- On the 80 locally licensed channels, limit applicants to obtaining five channels

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[33]The proposed authorizations on the 80 locally licensed channels are referred to herein as "local SMR licenses."

[34]Under self-coordination procedures, prior Commission approval of site and frequency selection is not required, and the licensee is responsible for ensuring that its operations comply with our co-channel interference and geographic separation standards. In addition, the licensee must ensure that such operations do not have a significant effect on the environment as defined in Part 1 of our Rules and comply with applicable air safety requirements as outlined in Part 17 of our Rules.

[35]The Commission nonetheless would make an individualized assessment of the public interest benefits associated with each incumbent-to-MTA licensee transfer as required by Section 310 of the Communications Act.

at a time within any geographic area and require all such channels to be constructed and operating before additional channels can be obtained in the same area; require construction and commencement of operations within 12 months of license grant; and, discontinue acceptance of applications for extended implementation under Section 90.629 of the Commission's rules.

13. In making these proposals, we recognize that the large number of SMR systems already licensed in the 800 MHz band creates complications for converting to a new regulatory regime. We also recognize that while many SMR licensees have expressed interest in providing wide-area service that is comparable to cellular or broadband PCS service, many other members of the SMR community -- particularly operators of smaller systems -- do not seek to provide such service. With these considerations in mind, we emphasize that our goal is to establish a flexible regulatory framework that will promote both diversity and competition in the SMR service. Accordingly, we believe that any rules and policies adopted in this proceeding must promote the following four objectives: (1) providing opportunities for 800 MHz SMR system operators in all areas of the country to develop wide-area systems while also protecting the viability of smaller systems; (2) ensuring that all SMR licensees make productive use of the spectrum by constructing and implementing their systems promptly; (3) encouraging more efficient use of SMR spectrum, particularly in congested areas, through development of technologically advanced systems supporting enhanced services such as seamless wide-area roaming and high speed data transmission; and (4) removing any unnecessary regulatory burdens that hamper the efforts of 800 MHz SMRs to compete effectively with other CMRS offerings.

14. In the following section, we discuss and request comment on the specific elements of our proposal and on a variety of other regulatory issues that will affect the future development of the 800 MHz SMR industry.[36] We request comment on these and any additional issues that parties believe we should address with regard to 800 MHz SMR services and rules.

IV. DISCUSSION

A. Channel Assignment and Service Areas

15. In the *CMRS Third Report and Order*, we determined that our SMR channel assignment rules should be revised to facilitate MTA-based licensing in some portion of the 800 MHz SMR band.[37] We deferred the issue of which portion of the band should be used for MTA-based licensing, however, as well as whether this portion should be further divided

[36]The proposed changes to our technical rules are set forth in Appendix A while our proposals regarding changes to the licensing and competitive bidding rules and procedures are discussed in the Further Notice.

[37]*CMRS Third Report and Order, supra* note 3, ¶ 97.

into smaller spectrum blocks. We now propose to divide the existing 14 MHz of SMR spectrum into two categories for purposes of future licensing. The 10 MHz "upper block" would be comprised of the 200 contiguous SMR channels (Channels 401 to 600) and would be licensed on an MTA basis in four blocks of 2.5 MHz each.[38] The remaining 4 MHz, comprised of the 80 non-contiguous channels, would be licensed in groups of up to five channels on a station-by-station basis. We discuss each element of this proposal in greater detail below.

1. Spectrum Designated for MTA Licensing

16. Our proposal to allocate 10 MHz of SMR spectrum for MTA-based licensing is derived in part from the proposal made by Nextel in its comments in the CMRS proceeding.[39] In its comments, Nextel argued that 10 MHz of spectrum constitutes the minimum allocation necessary for an SMR licensee to compete with cellular and broadband PCS providers, many of whom have significantly larger amounts of spectrum at their disposal.[40] Nextel also argued that obtaining contiguous spectrum is essential to the competitive viability of wide-area SMR because it enables systems to use spread spectrum and other broadband technologies that are available to cellular and PCS but unavailable to systems operating on non-contiguous channels.[41]

17. We tentatively conclude that Nextel's proposed distinction between the contiguous "upper" 10 MHz block and the "lower" 4 MHz of non-contiguous channels has merit for purposes of considering what spectrum should be designated for wide-area licensing. In the CMRS proceeding, commenters contended that contiguous spectrum is needed by wide-area SMR systems more than local systems because it allows wide-area systems to utilize advanced technologies to compete effectively with cellular and broadband PCS systems.[42] In the *CMRS Third Report and Order*, we agreed with the proposition that assigning contiguous spectrum,

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[38]Each MTA spectrum block would consist of 2.5 MHz of spectrum comprised of two paired 1.25 MHz blocks of spectrum from the 816-821MHz and 861-866 MHz bands, respectively. This corresponds to the current pairing of SMR channels for two-way communications purposes.

[39]Reply Comments of Nextel at 13.

[40]Comments of Nextel at 11. A cellular licensee is allocated 25 MHz of spectrum in any "cellular geographic service areas" (CGSAs). Broadband PCS licensees may obtain a license for either 30 MHz or 10 MHz of spectrum, and they can aggregate multiple licenses to a maximum of 40 MHz in any BTA or MTA. Thus, under Nextel's proposed channel assignment plan, a SMR licensee for a specific MTA would receive an amount of spectrum equivalent to the minimum spectrum assignment for a broadband PCS licensee, a competing CMRS provider.

[41]Reply Comments of Nextel at 16.

[42]*See* Reply Comments of OneComm at 4-5; Reply Comments of CellCall, Inc. at 7. *See* Appendix D for a list of pleadings in GN Docket No. 93-252 and the acronyms used to cite commenters.

where feasible, is likely to enhance the competitive potential of wide-area SMR providers.[43] Finally, we believe contiguous spectrum offers greater flexibility to wide-area service providers who must tailor their spectrum usage to afford protection to incumbent licensees within the 800 MHz band. Therefore, because the upper 200 SMR channels constitute a contiguous block of spectrum, we tentatively conclude that this block is best suited for wide-area licensing. We seek comment on this tentative conclusion.

18. We also seek comment on our tentative conclusion that the 80 non-contiguous SMR channels should be licensed on a local basis. Because of the diversity of potential uses of SMR spectrum, we believe that it is important not to license the entire 800 MHz service on a wide-area basis. Our proposal to retain 80 channels for local licensing derives from our recognition that not all SMR licensees seek to provide wide-area service and our belief that the interests of potential wide-area service providers should be balanced against the interests of those who prefer to provide more specialized local service. By proposing that 4 MHz of spectrum continue to be licensed on a local basis, we seek to strike a balance between these interests. The proposed allocation of 10 out of 14 MHz to MTA-based systems reflects the fact that wide-area systems seeking to provide high-capacity "cellular-type" service typically require more channels than smaller systems more oriented towards dispatch service. Such wide-area systems also provide more capacity per channel and thus use the spectrum more efficiently. We believe that retaining 4 MHz for local channel-by-channel licensing should be sufficient to meet the needs of service providers who do not require use of large blocks of channels over wide areas. In addition, while we recognize that the lower 80 channels are already heavily licensed, we believe that designating this portion of the spectrum for local use while designating the upper 10 MHz for wide-area use could lead to voluntary frequency swaps between incumbent local systems on upper channels and incumbent wide-area systems on lower channels. We request comment on whether dividing the 800 MHz band spectrum in this fashion is fair and equitable and will lead to efficient spectrum use. We ask commenters who oppose this tentative decision to suggest alternative allocations that would fairly balance the interests of wide-area and local SMR systems.

19. We recognize that the proposed bifurcation of 800 MHz SMR spectrum described above is based on certain assumptions about the future development of SMR service. Nevertheless, we are mindful of the fact that the SMR service is changing due to technological advances. Consequently, today's stand-alone SMR operator could be the cornerstone of tomorrow's wide-area system, which may have a design and structure either similar to or significantly different from current wide-area systems. We are concerned that the natural evolution of the service not be hampered by organized implementation of a wide-area licensing scheme, but also that it does not operate to defeat the goals that motivate today's proposal. In this connection, our objective is to preserve flexibility and the ability to adapt to new competitive conditions for all varieties of SMR service providers. We therefore seek comment on whether the channel assignment principles of our wide-area licensing proposal contain sufficient flexibility to permit continued operation and potential consolidation

[43] *CMRS Third Report and Order*, *supra* note 3, ¶ 103.

of current stand-alone operators. We ask commenters who oppose this tentative decision to suggest measures by which such flexibility can be incorporated into our wide-area licensing approach.

2. Size of MTA Spectrum Blocks and Spectrum Aggregation Limit

20. While we tentatively agree with Nextel's view that 10 MHz of spectrum should be designated for MTA-based licensing, we are not proposing that the 10 MHz block in each MTA be licensed to a single provider. Such an approach would preclude the possibility of licensing multiple MTA licensees in each market, while dividing the spectrum into multiple blocks would allow applicants to apply for the spectrum they need and the marketplace to decide whether the spectrum is most valuable on an aggregated or disaggregated basis. We also note that some commenters in the CMRS proceeding disagreed with Nextel's contention that 10 MHz is the "minimum" amount of spectrum needed to create a viable competitor to cellular and PCS. These commenters contended that viable, competitive MTA-based SMR systems could be based on fewer channels even though such systems might not be capable of providing the full array of services offered by a cellular or 30 MHz PCS licensee.[44] We therefore propose to divide the 10 MHz "MTA block" into smaller blocks for licensing purposes.

21. In determining the appropriate size of these blocks, however, we believe they should not be so small that a licensee would have difficulty establishing a viable wide-area system on a single MTA block, or so numerous that the transaction costs associated with licensing multiple blocks would outweigh the benefits achieved by using such procedures. In the *CMRS Third Report and Order*, we observed that most commenters agreed that wide-area SMR systems must have the ability to use (and reuse) a large number of channels, preferably on contiguous frequencies, to compete successfully with cellular and broadband PCS.[45] We also observed that in the 1993 *Notice* in PR Docket 93-144 we proposed to allow wide-area licensees to acquire up to 42 channels (equivalent to 2.1 MHz of spectrum) at a time in an MTA. Our rationale at the time for proposing that number of channels was that it reflected the minimum number of channels needed to construct a system based on the technology commonly used by SMR systems to employ frequency reuse.[46]

22. Based on the record in this proceeding and the comments submitted in the CMRS proceeding, we propose to divide the upper 10 MHz of 800 MHz SMR spectrum into four blocks of 2.5 MHz, corresponding to 50 channels per block under our existing frequency allocation rules. These blocks approximate the 42-channel threshold for frequency reuse

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[44]For example, JMTV, Inc. opined that a 10-20 channel block may be appropriate. Reply Comments of JMTV, Inc. at 1.

[45]*CMRS Third Report and Order*, *supra* note 3, ¶ 101.

[46]*See Notice*, *supra* note 1, ¶ 19, n.40.

previously identified in the *Notice*, and would allow for the possibility of licensing more than one wide-area provider in each MTA. We also would allow applicants to bid for multiple blocks within a given MTA, so that the marketplace can determine whether these blocks are most valuable separately or aggregated together. We request comment on whether our proposed allocation is a fair division of channels within the MTA and will lead to efficient spectrum use. Commenters are particularly encouraged to address the appropriateness of alternative block sizes both smaller and larger than 2.5 MHz. In addition, we ask commenters to address whether licensees should be allowed to sub-license portions of larger blocks instead of aggregating smaller blocks.

23. We also seek comment on whether there should be any limit on aggregation of 800 MHz SMR spectrum by a single licensee within a particular MTA. We tentatively conclude that such an aggregation limit is unnecessary. In the *CMRS Further Notice*, we sought comment on whether the ability of CMRS providers to aggregate spectrum should be limited in order to promote competition and protect against excessive concentration of market power. In the *CMRS Third Report and Order*, we concluded that a 45 MHz cap on aggregation of broadband PCS, cellular, and SMR spectrum, combined with existing service-specific caps for cellular and PCS,[47] was sufficient to maintain a competitive CMRS market.[48] In light of this conclusion, we do not believe that establishing an additional aggregation limit within the SMR service is necessary. Assuming that a single licensee were to acquire all 10 MHz of MTA-licensed spectrum for a particular MTA, or even all 14 MHz of 800 MHz SMR spectrum, it would fall well short of the 45 MHz PCS/cellular/SMR spectrum cap. Moreover, its aggregated spectrum holdings would be significantly less than the amount of spectrum that may be aggregated by a cellular or broadband PCS licensee under our service-specific caps for those services. Finally, we note that SMR spectrum is significantly more congested than broadband PCS or cellular spectrum, further limiting the potential anti-competitive consequences of aggregation. Based on these factors, we tentatively conclude that there is virtually no risk that allowing unrestricted aggregation of SMR spectrum would have an adverse effect on CMRS competition. In fact, we are concerned that limiting SMR aggregation could handicap the providers of SMR services that we have determined to be potential competitors to broadband PCS and cellular providers with equal or larger spectrum holdings. We therefore propose to allow SMR licensees to seek and (if they are the high bidder for all blocks) obtain all of the MTA spectrum blocks in a market. We seek comment on this proposal.

3. Licensing of Non-Contiguous Local Channels

24. We propose to continue licensing SMR systems on the "lower 80" channels on a

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[47]A broadband PCS licensee is limited to 40 MHz of PCS spectrum (10 MHz for in-region cellular providers for 5 years and 15 MHz thereafter) in any geographic area. Similarly, a cellular licensee is limited to 25 MHz of cellular spectrum in any geographic area. *CMRS Third Report and Order, supra* note 3, ¶ 239.

[48]*Id.*, ¶ 238.

local basis in order to provide opportunities for SMR operators who seek to provide local as opposed to MTA-based service. We ask commenters to address two alternative approaches to local SMR licensing. The first alternative would be to continue licensing these channels based on the same geographic separation and channelization criteria that exist in our current SMR rules. Thus, applicants on these channels would be limited to seeking available sites and channels on a station-by-station, channel-specific basis. While this proposal arguably perpetuates some of the administrative burdens imposed by the current SMR rules, we believe it is a suitable approach for assigning spectrum to applicants who seek to provide local SMR service and require a relatively limited number of channels. Because these channels are already heavily licensed, using the current method of local licensing may be preferable in order to ensure continuity and minimize disruption in the future assignment of spectrum for local use. We also note that some of the administrative burdens of site-specific licensing have been eliminated by our decision in the *CMRS Third Report and Order* to eliminate the "40-mile rule" and loading requirements for all SMR licensees.[49]

25. The second local licensing alternative would be to discontinue site-specific licensing and instead offer licenses for individual channels or small channel blocks covering defined geographic areas. While we believe site-specific licensing is feasible, we are concerned about the practicality of selecting among mutually exclusive applicants with overlapping but not identical service areas. We note that area-specific licensing offers certain administrative advantages over site specific-licensing. In particular, given our decision to use competitive bidding procedures to select among mutually exclusive applicants, using defined service areas simplifies the problem of identifying mutually exclusive applications and implementing such procedures. In addition, area-specific licensing gives licensees greater flexibility to modify their systems within a designated area to adapt to changing customer demands. We therefore seek comment on whether this alternative would be preferable to continued site-specific licensing of the "lower 80" channels. We also seek comment on what service areas should be used and whether the 80 channels should be licensed individually or in blocks. With respect to service area, we believe BTAs could be an appropriate geographic area for local licensing, but we seek comment on alternative area definitions as well. We also seek comment on whether licensees should be able to disaggregate licensing areas to provide opportunities for service providers who seek to serve smaller areas. With respect to channels, we note that these 80 channels have previously been licensed in 5-channel blocks.[50] We therefore seek comment on whether we should continue to license these channels in 5-channel blocks so that existing licensees may seek the right to expand local systems on the same channels, or whether we should license fewer channels in each block. Finally, we seek comment on any possible alternatives for licensing of the "lower 80" channels that might further promote the ability for SMR operators to quickly gain access to spectrum and to provide efficient service to the public.

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[49]*See CMRS Third Report and Order, supra* note 3, ¶¶ 190, 192. These rules are set forth at 47 CFR §§ 90.623(c) (conventional), 90.627(b) (trunked), 90.631 (trunked), 90.633 (conventional).

[50]*See* 47 CFR § 90.617(c), Table 4A.

26. Although our alternative proposals for licensing on the "lower 80" channels are intended to accommodate the needs of local systems, we do not seek to prohibit use of these channels in connection with wide-area systems. Thus, we propose to allow licensees to use these channels for any purpose that is technically consistent with our rules, whether as part of a local system or a wide-area system.[51] We also do not propose to restrict the ability of licensees on these channels to aggregate channels or integrate local systems to provide service over a larger area. In light of our proposed designation of 10 MHz of spectrum for MTA licensing, however, we wish to ensure that our rules do not inadvertently allow MTA licensees to acquire large numbers of non-MTA channels primarily intended for local use. We therefore tentatively conclude that a limit should be placed on the number of non-MTA channels that an applicant may obtain at one time in an area without constructing and commencing operations on previously licensed channels in the same area.[52] Specifically, we propose to limit grants of the "lower 80" channels to no more than five channels at one time, which is the applicable limit under our current rules.[53] In addition, in order to protect against channels being underutilized for long periods, we propose to cease accepting requests for extended implementation on these channels and to adhere strictly to the 12-month construction requirement for all newly licensed SMR systems classified as CMRS.[54] We seek comment on the potential effectiveness of these proposals and on whether there are alternative mechanisms that could be employed to protect against spectrum warehousing in this service.

4. Licensing in Mexican and Canadian Border Areas

27. Our proposal for bifurcating the 800 MHz SMR band requires us to consider how to deal with SMR allocations in the Mexican and Canadian border areas, which differ from allocations in the rest of the nation.[55] Specifically, in the Mexican border area, SMR channel

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[51]Conversely, we do not propose to preclude MTA licensees from establishing facilities to provide local service within their MTA blocks, provided that they meet their overall coverage obligations.

[52]*See CMRS Third Report and Order, supra* note 3, ¶ 193. As discussed in Section IV(B)(3)(a) *infra*, we are seeking comment on whether a defined protected service area should be adopted for incumbent local systems. If a defined service area is adopted, then such area also would define the geographic boundaries for the proposed limitation an requests for additional channels.

[53]*See* 47 CFR § 90.621(a)(1)(iv).

[54]*See CMRS Third Report and Order, supra* note 3, ¶ 181. As we indicated in the *CMRS Third Report and Order* although SMR licensees will be allowed to use these channels as part of a larger wide-area SMR system on a site-by-site basis, all stations authorized on such channels must be constructed within 12 months. *Id.*

[55]*See* 47 CFR §§ 90.615(a)(5), Table 4A, 90.619(b)(8), Table 12, 90.619(b)(9), Table 16, 90.619(b)(10), Table 20, and 90.619(b)(11), Table 24 for channels available near the Mexican and Canadian borders. Frequency requests 110 km (68.4 miles) or less to the Mexican border are considered to be in the Mexican border area. Frequency requests 140 km (87 miles) or less to the Canadian border are considered to be in the Canadian border area. Moreover, the Canadian border area is divided into 8 regions, from the east to the west of the United States, with differing requirements.

availability is limited to 30 of the "upper" 200 channels in the proposed MTA band, 5 of the lower 80 non-contiguous channels, and 60 additional channels reserved for SMR use in the border area that are allocated to non-SMR services elsewhere. Moreover, these channels are offset 12.5 kHz lower in frequency than the corresponding SMR channels in non-border areas.[56] In the Canadian border area, SMR channel availability varies by region, with the majority of regions having between 55 and 120 channels in the proposed MTA band, none of the lower 80 channels, and some additional channels outside of either group.

28. Because SMR licensees operating in border areas have access to only a portion of the spectrum we have proposed to allocate for MTA licensing, we seek comment on whether we should designate other SMR channels for MTA-based use in these areas. Possible options could include allowing use of the lower 80 non-contiguous channels by MTA licensees or the aggregation of channels from among the four 50-channel blocks that are available in border areas and offering them for bidding in a single block of comparable size or in multiple blocks of smaller size. We tentatively conclude, however, that attempting to create different allocations in border areas would be administratively unworkable. First, we note that the Commission-defined border areas do not coincide with MTA boundaries. Second, to the extent that less spectrum is available to MTA licensees in border areas, we believe that applicants can assess the impact of more limited spectrum availability in their valuation of those blocks for competitive bidding purposes. Based on these factors, we propose to license MTA blocks on a uniform basis without distinguishing border from non-border areas, *i.e.*, MTA licensees will be entitled to use any available border area channels within their spectrum blocks, subject to the relevant rules regarding international assignment and coordination of such channels. We seek comment on this proposal.

29. We also request comment on how to license the channels in border areas that are not contained in the 200-channel MTA block, which include both lower 80 SMR channels and channels that are allocated to non-SMR services outside the border areas. In general, we propose to license these channels on a channel-by-channel basis under the same rules we adopt for the lower 80 channels in non-border areas. We ask commenters to discuss whether this approach is appropriate for these channels or whether some other channel assignment mechanism would better serve the public interest.

B. Rights and Obligations of MTA Licensees

1. Operational Flexibility

30. We believe that a key element in any new licensing scheme for wide-area SMR systems is that licensees be extended the same flexibility, to the extent feasible, as cellular and PCS licensees in terms of the location, design, construction, and modification of their facilities throughout their service area. Accordingly, we tentatively conclude that MTA licensees in the 800 MHz band should be authorized to construct stations at any available site and on any

[56] *See* 47 CFR § 90.619(a).

available channel within their MTAs. We also propose to allow MTA licensees to "self-coordinate" system modifications within their service areas, *i.e.*, to add, subtract, move, and otherwise modify their base station facilities without any need for prior Commission consent, provided they notify the Commission of the coordinates and certify compliance with our co-channel interference protection and emission mask requirements. This simplified approach toward initial licensing and subsequent system modification will substantially reduce the existing administrative burden on both SMR licensees and the Commission, and will establish greater consistency with our cellular and PCS licensing rules.

31. While we believe that operational flexibility is a substantial benefit of MTA licensing, we recognize that this flexibility will be limited by the large number of systems already authorized and operating in the 800 MHz band, particularly in major markets. Even if MTA licensees will not immediately obtain clear spectrum comparable to our allocations for cellular or broadband PCS, however, we believe that MTA licensing will confer other valuable rights on the licensee that will enhance its ability to establish wide-area service. First, we propose that if an incumbent fails to construct, discontinues operations, or otherwise has its license terminated by the Commission, the spectrum covered by the incumbent's authorization should automatically revert to the MTA licensee who has obtained the contingent rights to that spectrum. Second, we propose that the MTA license confer the right to negotiate with incumbent systems within the MTA to purchase or relocate their facilities. In this regard, we propose that any request for transfer or assignment of an incumbent authorization to the MTA licensee be presumptively considered in the public interest, although we also intend to review each such request as required by Section 310(d) of the Communications Act. While we do not propose to make relocation of incumbent licensees mandatory (*see* Section IV(B)(2) *infra*), we believe that these are potentially valuable rights nonetheless. In addition, granting these rights to the MTA licensee will eliminate much of the administrative burden on both licensees and the Commission with respect to future management of the spectrum contained in the MTA blocks. We seek comment on these proposals and other alternatives, including the costs and benefits associated with each alternative in markets that are heavily occupied by incumbent licensees.

2. Treatment of Incumbent Systems

32. Given the large number of systems already authorized in the 800 MHz SMR service, a crucial issue associated with our wide-area licensing proposal is its impact on existing 800 MHz SMR licensees. Particularly, we are concerned about the potential effect on the operations of local SMR licensees occupying the upper 200 channels which, under the new licensing scheme, would be designated for MTA-based licensing. In our 1993 EMSP proposal, we proposed that incumbent licensees be allowed to continue operating under their existing authorizations and that wide-area licensees provide co-channel protection to all such systems constructed and operating within their service areas. Nextel, on the other hand, proposed in the CMRS proceeding that local SMR licensees occupying newly-designated wide-area SMR spectrum be required to "retune" their equipment to operate on other available SMR channels. Nextel further proposed that the cost of retuning, which it argued would not

be significant, would be paid by the wide-area licensee, and that no licensee would be forced to move off its frequencies unless acceptable alternative frequencies were available.[57]

33. As indicated in the *CMRS Third Report and Order*, the mandatory relocation aspect of Nextel's proposal received vigorous and widespread opposition from existing SMR licensees.[58] While many commenters in the CMRS proceeding favored wide-area licensing, many also focused on the need for any such plan to take into account the needs of other segments of the SMR industry.[59] The reasons for these commenters' opposition to Nextel's proposal included: (a) Nextel's alleged failure to address the practical problems associated with "retuning" (such as equipment replacement, management agreements, and renegotiation of site leases); (b) the unavailability of 800 MHz trunked SMR channels in most markets, thus requiring relocated SMR licensees to compete for a few conventional SMR channels;[60] (c) the lack of sufficient alternative spectrum; and (d) the impairment of small existing analog SMR licensees' ability to convert to wide-area operation.[61]

34. Based on the record in this proceeding and the numerous comments regarding the Nextel proposal, we tentatively conclude that incumbent SMR systems should not be subject to mandatory relocation to new frequencies pursuant to Nextel's proposed "band-clearing" approach. We are concerned that mandatory relocation could impose significant cost and

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[57]Comments of Nextel at 11-12.

[58]*See* Comments of Pittencrieff at 7; Comments of NABER at 14-17; Reply Comments of ITA/Alliance of Private 800/900 MHz Licensees at 2-5; Reply Comments of Joriga Electronics, Inc. at 6; Reply Comments of Fetterman at 2-3; Reply Comments of Don Cook at 2-3; Reply Comments of Eden Communications, Inc. at 1-3; Reply Comments of The Ericsson Corporation at 1-4; Reply Comments of PCC Management Corporation at 2; Reply Comments of T & K Communication Systems, Inc. at 1-2; Reply Comments of Fresno Mobile Radio, Inc. at 1; Reply Comments of Southeastern SMR Association at iii, 19-22; Reply Comments of The Southern Company at 25-35; Reply Comments of Russ Miller Rental at 2-9; Reply Comments of USITV/Hunter at 3-4; Reply Comments of JMTV, Inc. at 1; Reply Comments of RMTV, Inc. at 1; Reply Comments of Mobile U.H.F., Inc. at 1-2.

[59]*See, e.g.*, Comments of US Sugar in response to *CMRS Further Notice* at 10 (recommending retention of existing channel assignment rules for traditional SMR systems while establishing a different licensing mechanism for wide-area SMR licensees which considers the traditional SMR systems' expansion needs); Comments of Russ Miller Rental in response to *CMRS Further Notice* at 4 (noting the likelihood that local SMR licensees will continue to enter into joint ventures to be more competitive and suggesting that we should permit such licensees to implement pseudo-wide-area SMR systems); Comments of NABER in response to *CMRS Further Notice* at 13 (contending that one of the goals of a service-area based licensing approach should be to enable small SMRs to "continue to operate and have access to spectrum for growth where available").

[60]Conventional SMR systems operate on one to four channels with no trunking allowed, *i.e.*, users must scan each channel for available air time. Trunked SMR systems use blocks of five or more channels, with users automatically routed to an available channel.

[61]*See e.g.*, Reply Comments of Eden Communications, Inc. at 3; Reply Comments of The Ericsson Corporation at 3-4; Comments of NABER at 11.

disruption on incumbent licensees and their customers. Even if we limit mandatory relocation to instances where there are substitutable channels available and require the costs of relocation to be paid by the MTA licensee, we are also concerned that mandatory relocation would inevitably draw the Commission into disputes between licensees over substitutability of channels, compensable costs, and other related issues. In addition, relocation is likely to be complicated as a practical matter by a lack of sufficient alternative frequencies in many markets to accommodate all incumbents in the MTA blocks on a one-to-one basis. If this is the case, mandatory relocation could require us to become involved in decisions about which incumbents are required to relocate and which are not.

35. Instead of mandating relocation, we prefer to allow MTA licensees and incumbents to negotiate relocation, frequency swaps, mergers, purchases, or other arrangements on a voluntary basis. Many licensees who are currently building wide-area SMR systems (and are likely to bid on MTA licenses where such systems are located) have previously used such transactions to acquire consolidated blocks of frequencies, and we fully expect this process to continue. We therefore tentatively conclude that decisions regarding relocation should be left to the parties and the marketplace. We ask commenters to address whether relying on voluntary negotiations between MTA licensees and incumbents will continue to provide sufficient inducement for incumbents to relocate. We also request comment on whether the Commission should intervene if incumbents refuse "reasonable" inducements to relocate. We further request that such comments identify or define what constitutes a "reasonable" inducement and the specific form of intervention, if any, that should be taken by the Commission in those instances when the incumbent has refused such inducements.

36. While we tentatively conclude that mandatory relocation will not be required, we nonetheless seek further comment on this option as an alternative to voluntary arrangements between MTA licensees and incumbents. For example, one possible alternative would be to establish procedures analogous to our provisions in the *Emerging Technologies* docket for relocation of microwave licensees from the 2 GHz PCS band.[62] Under this alternative, we would establish an initial period (*e.g.*, two years) for MTA licensees and incumbent systems to negotiate voluntary relocation agreements. After the expiration of this two-year period, an MTA licensee would be able to initiate a one-year mandatory period regarding relocation terms upon written request to the incumbent licensee for the channel on which it is operating. During this period, both the MTA licensee and the incumbent licensee would be required to negotiate in good faith. If no agreement was reached by the end of this one-year period, the MTA licensee would then be able to request mandatory relocation of the incumbent, provided that it would (1) demonstrate the availability of fully comparable alternative frequencies, (2) guarantee payment of all relocation expenses, including all engineering, equipment, site,

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[62]*See* Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. 92-9, *First Report and Order and Third Notice of Proposed Rule Making*, 7 FCC Rcd 6886 (1992), *Second Report and Order*, 8 FCC Rcd 6495 (1993), *Third Report and Order and Memorandum Opinion and Order*, 8 FCC Rcd 6589.

and regulatory fees, as well as any reasonable additional costs that the relocated licensee may incur, and (3) construct new SMR facilities, if necessary, and test them for comparability to the existing system. We seek comment on this alternative, and particularly on possible mechanisms for ensuring that all relocation costs to incumbents would be guaranteed by the MTA licensee. In addition, we ask commenters to describe the specific costs, both direct and indirect, that would be associated with relocation, including approximations of the magnitude of such costs and whether they should be fully reimbursable by the MTA licensee. We also seek comment on whether MTA licensees should be required to offer some form of premium over cost (*e.g.*, additional channels or improved facilities) if they seek to invoke a mandatory relocation option.

37. Even in those situations where incumbents are allowed to continue operating on already-licensed facilities, we tentatively conclude that incumbent systems should not be allowed to expand beyond their existing service areas on MTA-licensed channels without the consent of the MTA licensee (unless, of course, the incumbent in question is itself the MTA licensee for the relevant channels). Allowing non-MTA licensees to expand their systems at will after MTA licensing has occurred would substantially diminish the value of the MTA license and would create continuing uncertainty for MTA applicants and licensees alike. By restricting incumbents' ability to expand, we seek to preserve the value of the MTA license and to give the MTA licensee the maximum opportunity to build viable systems while allowing the incumbent to remain. Although we propose to restrict incumbent licensees' ability to expand their systems on spectrum covered by MTA licenses, we do not want to take any action that would prevent incumbent local systems from remaining viable. Therefore, we propose to allow incumbent licensees to freely modify their facilities provided such modifications do not expand their service areas. In addition, we emphasize that MTA licensees and incumbents would be free to negotiate voluntary arrangements that allow an incumbent to expand its system within an MTA block.[63] Finally, we recognize that there may be circumstances where an MTA licensee should be required to permit incumbents to make minor alterations to their service areas to preserve the viability of their systems (*e.g.*, moving a transmitter because of loss of site). We believe that generally restricting incumbents' ability to expand on MTA spectrum blocks while providing incumbents with limited flexibility to modify their systems as described above would strike a fair balance between the interests of the incumbents and those of the MTA licensees. We ask commenters to address the advantages and disadvantages of these proposals and to provide specific examples of the circumstances under which incumbents should be permitted to modify their systems.

3. Co-Channel Interference Protection

38. As we observed in the *CMRS Further Notice*, we have imposed co-channel interference obligations on mobile service licensees to ensure that they do not cause interference to adjacent licensees operating on the same frequency. For those services with

[63]Incumbent licensees are also free to acquire non-MTA channels in the 800 MHz band to augment their existing SMR holdings.

Commission-defined service areas (such as cellular, broadband PCS, and narrowband PCS), our rules are typically designed to prevent interference at or near service area boundaries. On the other hand, for those services with station-defined service areas (such as Public Land Mobile Services, 900 MHz paging, and local 220-222 MHz service), each base station in the licensee's system must be located and operated in accordance with geographic separation standards and/or field strength limits in order to ensure that the co-channel stations of other licensees are protected from interference. In the *CMRS Third Report and Order*, we concluded that, as a general matter, we would retain our existing co-channel protection rules for CMRS licensees.[64] We indicated, however, that 800 MHz MTA licensees would have dual co-channel interference protection obligations -- protection of incumbent co-channel facilities and protection of the facilities of an MTA licensee in a neighboring MTA.

a. Incumbent SMR Systems

39. In the *CMRS Third Report and Order*, we concluded that wide-area licensees would continue to be subject to existing station-specific interference criteria with respect to all incumbent co-channel stations.[65] Under these rules, an MTA licensee would be required to afford protection to incumbents as provided by § 90.621(b) , either by locating its stations at least 113 km (70 mi) from the facilities of any incumbent, or by complying with the co-channel separation standards set forth in our "short-spacing" rule if it seeks to operate stations located less than 113 km (70 mi) from an incumbent licensee's facilities.[66] We ask commenters to address whether applying these existing interference requirements to MTA licensee protection of incumbents would hamper the MTA licensee's ability to fully construct its system.

40. We also request comment on whether, in addition to requiring MTA licensees to protect incumbents in accordance with our co-channel protection interference criteria, we should incorporate provisions that would enable incumbent systems operating on the "upper 200" channels to construct stations anywhere within a defined protected service area. Although we have traditionally applied the protected service area concept to non-cellular Part 22 services, it has never been incorporated into our Part 90 rules. The potential advantage of adopting a protected service area definition is that it would give incumbent systems the opportunity to establish new "fill-in" base stations within a defined area without the need for prior application to the Commission following station construction. We therefore seek

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[64] *CMRS Third Report and Order, supra* note 3, ¶ 143.

[65] *Id.*, ¶ 145.

[66] 47 CFR §90.621(b)(4). The distances in the Table calculated based on the requirement that the 22 dBu signal strength contour of a proposed station does not fall within the 40 dBu signal strength contour of an existing station.

comment on whether to establish a fixed-radius protected service area (*e.g.*, 30 kilometers)[67] for existing SMR systems. Under this proposal, we would allow the incumbent licensee to construct new base stations within this radius of its originally authorized station provided that the 40 dBu signal strength contour of the existing station would not be extended by the new base stations.[68] This would enable an incumbent licensee to add low power sites to its systems within a defined area without expanding its service area at the expense of the MTA licensee. We request comment on the suitability of this proposed service area definition and ask commenters to include a technical analysis of this proposal or any alternative proposals that permit greater flexibility for locally licensed SMR systems.

b. Adjacent MTA Licensees

41. In the *CMRS Third Report and Order*, we also concluded that the co-channel interference protection obligations of MTA licensees with respect to other MTA licensees would be similar to those imposed in the cellular and PCS services. Cellular and PCS licensees are required to comply with interference protection criteria between Commission-defined service areas only at service area borders.[69] Similarly, we tentatively conclude that wide-area SMR licensees in the 800 MHz band should not be allowed to exceed a signal level of 22 dBuV/m at their service area boundaries (unless they negotiate a different signal strength limit with all potentially affected adjacent licensees). This approach, although somewhat conservative, is consistent with our co-channel protection rules for Subpart S stations operating above 800 MHz, which provides that the undesired or interfering signal level at the edge of a station's service area should not exceed 22 dBuV/m.[70] We request comment on whether this is an appropriate field strength level for a wide-area licensee's operations at its service area border. Additionally, we ask commenters to address whether we should use 40 dBuV/m as the measure of the desired signal level at the service area border. We also propose to require MTA licensees utilizing field strength levels greater than the one ultimately adopted to coordinate with and obtain concurrence from all bordering SMR MTA licensees. We seek comment on whether this restriction would further our goal of avoiding harmful interference without being an overly burdensome requirement.

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[67]This distance corresponds roughly to the 40 dBu signal strength contour of an SMR station operating at maximum authorized power (1000 watts ERP) and maximum authorized antenna height (305 meters).

[68]Under this proposal, an incumbent who constructed low-power stations that maintained the 40 dBu contour of its original station would not be subject to the requirements of the short-spacing table in relation to the MTA licensee (*see* 47 CFR § 90.621(b)(4)), *i.e.*, the incumbent would be entitled to construct low-power stations up to 30 kilometers from its originally authorized site even if the resulting stations were less than 88 kilometers from stations of the MTA licensee, the minimum distance otherwise required by our short-spacing rules.

[69]*Id.*

[70]*See Co-Channel Protection Report and Order, supra* note 7, ¶¶ 5-8.